

LISTING OF CLAIMS

1. (Original) A process for the acid extraction of a hydrocarbon feed containing nitrogen contaminants which comprises: contacting the hydrocarbon feed with a mineral acid in an extraction zone to produce an acid treated hydrocarbon mixture, conducting the acid treated hydrocarbon mixture to a separation zone and separating the acid treated hydrocarbon mixture into a nitrogen lean hydrocarbon and a nitrogen rich hydrocarbon/acid mixture, conducting the nitrogen rich hydrocarbon/acid mixture to a first compartment of a membrane-containing unit, said unit further comprising a membrane and a second compartment, and selectively permeating the nitrogen rich hydrocarbon/acid mixture through the membrane into a hydrocarbon lean acid permeate in the second compartment and a hydrocarbon rich acid retentate in the first compartment.

2. (Original) The process of claim 1 wherein the mineral acid is sulfuric acid.

3. (Currently Amended) The process of ~~any preceding~~ claim 1 wherein the extraction zone is a fiber film contactor.

4. (Currently Amended) The process of ~~any preceding~~ claim 1 wherein the separation zone is a settler.

5. (Currently Amended) The process of ~~any preceding~~ claim 4 wherein the settler includes a coalescing media.

6. (Currently Amended) The process of ~~any preceding~~ claim 1 wherein the membrane comprises a perfluorinated ionomer membrane.

7. (Currently Amended) The process of ~~any preceding~~ claim 6 wherein the perfluorinated ionomer membrane contains active anionic groups.

8. (Currently Amended) The process of ~~any preceding~~ claim 7 wherein the perfluorinated ionomer membrane is a copolymer of perfluoroethylene and perfluorovinylether.

9. (Currently Amended) The process of ~~any preceding~~ claim 1 wherein the membranes are made of at least one of crosslinked polyvinyl alcohol, polyvinyl sulfate and oxoanion modified polyvinyl alcohol.

10. (Currently Amended) The process of ~~any preceding~~ claim 9 wherein the oxoanion is phosphate, arsenate, selenate, tellurate, nitrate or borate.

11. (Currently Amended) The process of ~~any preceding~~ claim 1 wherein at least a portion of the hydrocarbon rich acid retentate is passed to the separation zone.

12. (Currently Amended) The process of ~~any preceding~~ claim 1 wherein at least a portion of the hydrocarbon lean acid permeate is passed to the extraction zone.

13. (Currently Amended) The process of ~~any preceding~~ claim 1 wherein the hydrocarbon lean acid permeate is passed to a second membrane containing unit.

14. (Currently Amended) The process of ~~any preceding~~ claim 11 wherein at least a portion of the hydrocarbon rich acid retentate is regenerated.